



## ADVANTAGES

### The Outdoor Camera

#### Resistant to water, dust, sand, crash, cold and pressure

- ✓ Tough construction for shooting in demanding outdoor conditions, you can bring it everywhere or let it in anybody's hands !
- ✓ Reliable waterproof construction to assure worry-free shooting at a depth of 10m
- ✓ Exceptional shockproof capability; it can withstand a fall from a height of 1.5m
- ✓ Crushproof to a pressure up to 100kg
- ✓ Coldproof to -10°C.

### High Quality Photo & Video

#### 14 MP Sensor and HD Video

- ✓ 14 MP CCD Sensor, to offer extremely detailed pictures
- ✓ HD Video 720p (1280 x 720 pixels, 30 fps) and HDMI terminal

### Versatile zoom lens

#### 28mm Wide-angle and 5X Optical Zoom lens

#### Equivalent 35mm : 28-140mm

- ✓ Wide-angle 5X zoom to accommodate a wide range of subjects and scenes from landscapes to fast-action sports events.
- ✓ 5 LED placed around the lens to avoid shadows on macro photos
- ✓ Macro shooting down to just 1 cm from the subject to get spectacular images of flower or insect
- ✓ Innovative Digital Microscope mode for accurate, detailed records of tiny parts for people interested in nature observation.
- ✓ Mode face detection, smile capture and blink detection
- ✓ ISO sensitivity up to 6400

**Dimensions :** Approx. 115.5(W) × 58.5(H) × 28.5(D)mm  
(including lens depth)

**Weight :** 143g body only

## CONFIDENTIAL

Provisory specs sheet - Embargo date 06/02/2014

# WG-20

## MY UNDESTRUCTIBLE CAMERA

Colour	Art. Code	EAN
Black	08089	0027075275218
Red	08076	0027075275102
White	08061	0027075274983

## SUPPLIED ACCESSORIES

Rechargeable lithium-ion battery D-LI92  
Charger kit K-BC92E  
USB cable I-USB7  
Carabiner strap O-ST104  
Macro stand O-MS1  
Software (CD-ROM) S-SW147

## OPTIONAL ACCESSORIES



Rechargeable battery Li-Ion D-LI92 - 39800  
Charger kit K-BC92E - 39804  
AC adapter K-AC117E - 38971  
Video cable I-AVC7 - 39552  
USB cable I-USB7 - 39551

WG Repair parts 3 O-CM1476 (for O-CH1470) - XXXXX  
WG Repair parts 1 O-CM1474 (for O-CM1471) - XXXXX  
WG repair parts 2 O-CM1475 (replacement nut for O-CM1471/72/73) - XXXXX  
Macro stand O-MS1 - 39004

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TECHNICAL SPECIFICATIONS

SENSOR	
Number of pixels	Approx. 14 megapixels - effective
Total pixels	Approx. 14.48 megapixels
Sensor size	1/2.3" CCD
Recorded pixels (still)*	14M(4288x3216), 10M(11.1(3216x3216), 10M(16.9)(4224x2376), 7M(3072x 2304), 5M(16.9)(3072x1728), 5M(2592x1944), 4M(16.9) (2592x1464), 3M(2048x1536), 2M(16.9)(1920 x 1080), 1024(1024 x 768), 640(640 x 480)  * In Digital Microscope mode, recorded pixels is fixed to 2M(1920x1080). * In Digital Wide mode, recorded pixels is fixed to 5M(2592x1944). (After Merge) Or fixed at 3M(2048x1536) in single frame. (Before Merge.) * At high ISO (3200-6400) recorded pixels is fixed to either 5M(2592x1944) or 4M(2592 x 1464). * In continuous shooting mode(High), recorded pixels is fixed to 5M(1600x1200) or 4M(2592x1464) per frame. * In frame composite mode, recorded pixels is fixed to 3M(2048x1536) or 2M(1920x1080). * In Digital Panorama mode, recorded pixels is fixed to 2M(1600x1200) per frame. * In Report mode, recorded pixels is fixed to 1280x960. * In Original Frame mode, recorded pixels is fixed to either 5M(2592x1944) or 4M(2592 x 1464).
Sensitivity	AUTO, Manual (ISO 80 - 6400)
Auto ISO range	ISO 80-100, ISO 80-200, ISO 80-400, ISO 80-800, ISO 80-1600
Quality level	★★★ Excellent, ★★ very good, ★ good
Shake Reduction	Pixel Track SR, Hi-sensitivity anti-shake mode (Digital SR)
Auto ISO range for SR	ISO 80 - 6400

LENS	
Focal length	PENTAX 5-25mm, equ. to 28-140mm in 35mm
Aperture	F3.5(W) - F5.5(T)
Smallest aperture	F4.2(W) - F6.6(T)
Construction	RICOH lens, 11 elements in 9 groups (5 aspherical elements)
Optical zoom	5X
Digital zoom	Approx. 6.7X
Intelligent Zoom*	Approx. 7.0x at 7M, approx. 33.5x at 640 (including optical zoom)

SCREEN	
Type	2.7" Wide TFT color LCD, approx. 230K dots, AR Coating (Cover only)
LCD frame rate	Approx. 30fps

FILE FORMATS	
Photo	JPEG(conforms to Exif 2.3), conforms to DCF2.0, DPOF, PRINT Image Matching III
Video	compatible, AVI (Motion JPEG), with sound
Audio**	WAV(PCM), monaural (audio sampling rate : 32kHz, 16bit)

MEMORY	
External memory	Compatible with SD/ SDHC/ SDXC and Eye-fi memory cards* *Verified memory cards : Sandisk, Panasonic, Toshiba
Internal memory	Built-in Memory (approx. 97.0MB),

FOCUSING	
Type	TTL contrast detection auto focus system, 9-point AF, Spot AF, Auto tracking AF
Modes	Infinity-landscape, Pan Focus, Manual Focus
Focus range	Standard : 0.5m - infinity (entire zoom range) Macro : 0.1 - 0.6m (entire zoom range) 1cm Macro : 0.01 - 0.3m (middle zoom position) Manual : 0.01m - infinity (Depends on the zooming steps. 0.01m only available in 2-4 zoom step)
Face detection	Face Detection AF&AE is available for all modes up to 32 faces. Smile Capture, Self-portrait Assist, Self-portrait Assist + Smile Capture, Blink Detection
Pet detection	Detect up to 1 pet's face(auto or select from pre-registered three faces)
Largest magnification	Approx. 0.4x, at focus mode: 1cm macro, focal Length 9.26mm, focusing distance 0.01m
AF Assist lamp	available
Macro light	available, 5 LED to assist close-up shooting

EXPOSURE CONTROL	
Metering system	Multi-segment metering, Center-weighted metering, Spot metering
Shutter speed	1/1500 - 1/4sec. 4sec at most. (Night Scene mode setting)
Exposure compensation	±2EV(1/3EV steps)

\* Intelligent zoom not applicable under (High ISO) Digital SR Mode and Report Mode.  
\*\* Voice recording functional after allocating it to «Green Button».

FLASH	
Flash modes	Flash-on and Flash-off modes. "Red-eye" compensation function employs a pre-discharge.
Flash range	Wide : approx.0.2 - 3.9m (ISO Auto) Tele : approx. 0.2 - 2.5m (ISO Auto)
VIDEO	
Resolution	1280(1280x720): approx. 30/15fps, 640(640x480): approx. 30/15fps, 320(320X240): approx. 30/15fps
Quality level	Fixed
Shake reduction	Movie shake reduction mode (Movie SR)
POWER SUPPLY	
Battery	Rechargeable D-LI92 lithium-ion battery
Capacity	Still*: approx. 260 shots (Rechargeable Lithium-ion battery) Playback**: approx. 280 min. (Rechargeable Lithium-ion battery) Movie : approx. 120 min.**; Audio : approx. 350 min. **  * Recording capacity shows approximate number of shots recorded during CIPA-compliant testing. Actual performance may vary depending on operating conditions. ** According to the result of RICOH IMAGING in-house testing.
Other	Optional AC adapter kit

INTERFACES	
Video output	NTSC/PAL
USB	USB2.0(Hi-Speed); PC/AV terminal, HDMI terminal (Type D, Micro port)

SHOOTING FEATURES	
Drive modes	One shot, Self-timer, Continuous Shooting, Burst Shooting, Remote Control, Interval Shooting, Auto Bracketing
Continuous shooting	Approx. 0.68 frame/sec (for up to 24 frames)
High speed cont. shooting	Approx. 2.27 f/sec (up to 19 frames); approx. 5.26 frame/sec(up to 19 f. at ISO 3200/6400 setting)
Scene Modes	Auto Picture, Program, Night Scene, Movie, Underwater, Underwater Movie, Digital Microscope, Landscape, Flower, Portrait, Digital Wide, Digital SR, Surf&Snow, Kids, Pet, Sport, Fireworks, Candlelight, Night Scene Portrait, Text, Food, Digital Panorama, Frame Composite, Report, Green
Auto picture scene modes	Landscape, Portrait, Night Scene, Night Scene Portrait, Standard, Flower, Sport, Candlelight, Blue Sky, Sunset, Text, Group Photo, Pet, Portrait&Blue Sky, Portrait&Sunset, Portrait&Backlight
White Balance	Auto, Daylight, Shade, Tungsten light, Fluorescent light, Manual
Dynamic range	available (Shadow/Highlight adjustment)
Noise reduction	Automatically applied when the shutter speed is slower than 0.25 sec

OTHER FEATURES	
World time	Supported
Date Imprint	Available (Date, Date & time, Time) (except Green)
Image Tone	Bright, Natural, Monochrome
Text size	Default, Large
Languages	English, French, German, Spanish, Portuguese, Italian, Dutch, Japanese, Danish, Swedish, Finnish, Polish, Czech, Hungarian,Turkey, Greek, Russian, Thai, Korean, Simplified Chinese, Traditional Chinese
Playback modes	Slideshow, Image Rotation, Small Face Filter, Ink Rubbing Filter, Collage, Digital Filter (B&W/ Sepia, Toy Camera, Retro, Color, Extract Color, Color Emphasis, High Contrast, Starburst, Soft, Fish-eye, Brightness, Miniature), Original Frame, Frame Composite, Movie Editing, Red-eye Compensation, Resize, Cropping, Image/Sound Copy, Voice Memo, Protect, DPOF, Startup Screen, Face close up playback.
Playback functions	One Shot, Index (6 thumb nails, 12 thumb nails), Enlargement (up to 10X, scroll available), Movie Playback, Sound Playback, Histogram, Folder display, Select&Delete, Calendar, Changing folder name
Digital filters (playback)	B&W / Sepia, Toy Camera, Retro, Color, Extract Color, Color Emphasis, High Contrast, Starburst, Soft, Fish-eye, Brightness, Miniature Filter
Movie edit functions	Save as still image, Divide Movies, Adding title picture
Self-timer count	10 sec, 2 sec, Remote Control (immediately, 3 sec)
Start-up Time	Approx. 1.3 sec
Release Time Lag	Approx. 0.037 sec
Water proof / Dustproof**	Equivalent to JIS Class 8 waterproof and JIS Class 6 dustproof capabilities.

DIMENSIONS AND WEIGHT	
Dimensions	Approx.115.5(W) × 58.5(H) × 28.5(D)mm (including lens depth)
Weight	With battery & SD card : Approx. 164g (loaded and ready) Body only : Approx. 143g (without battery and SD memory card)

SYSTEM REQUIREMENTS	
Operating systems	PC : Windows Vista®, Windows® 7, Windows® 8, Windows® 8.1 Mac : Mac OS X 10.6, 10.7, 10.8

SOFTWARE	
Windows: MediaImpression 3.6.1 LE(Windows) / Mac : MediaImpression 2.2 LE	

\*\* Waterproof (Up to 10m for 2hours)  
\*\* Shock proof (Up to 1.5m)  
\*\* Operating Temperature -10°C to 40°C